IN THE CLAIMS

Amendments to the Claims:

This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended): A memory matrix device for storing temporally sequential information in a manner that retains the sequence of information without dependence on multiple memory addresses, and is not ~~that is not~~ a serial sequential access memory, a random access memory or a dynamic random access memory, comprising:

~~parallel arrays of fixed memory storage units;~~

sequentially-connected arrays of fixed memory storage units;

means for applying the temporally sequential information to the array of fixed memory storage units; and

means for successively ~~activating each of the fixed memory storage units or linked arrays of said units in sequence to store or retrieve corresponding time slices of the temporally sequential information~~ latching and disabling each successive fixed memory storage unit in a sequentially-connected array of said units as it successively becomes saturated with information, thereby directing the next temporal bit of information to the next memory storage unit in said sequentially-connected array.

2. (Currently Amended): The memory matrix device according to claim 1, wherein the temporally sequential information is applied along parallel inputs to multiple ~~temporally linked~~ parallel sequentially-connected arrays of fixed memory storage units, such that ~~units in one array are activated to~~ a fixed memory storage unit of a given sequential order of one said array will store information [[of]] originating at the ~~parallel inputs at one~~ same point in time, ~~whereas units in other arrays are successively enabled to store~~ as information ~~from~~ stored in a similar unit of the same ~~parallel inputs at subsequent sequential points in time~~ sequential order on a separate parallel array of said units.

3. (Currently Amended): The memory matrix device according to claim 1, wherein the array of fixed ~~interconnected~~ memory storage units includes semiconductor memory devices.

4. (Currently Amended): The memory according to claim 3, wherein:

said means for applying includes an input bus or buses coupled to inputs of a first semiconductor ~~memory~~ device ~~or linked array~~ of a sequentially-connected array of said ~~devices, and a second semiconductor memory device, or linked array of said devices, adjacent functionally to the first semiconductor memory device or array;~~ semiconductor devices; and wherein

~~said means for successively activating includes a pulse generator for generating a pulse that enables storage of input data and a delay clock element for delaying the enabling pulse, said first semiconductor memory device or array being responsive to pulse to latch data presented at inputs thereof and said second semiconductor memory device or array being responsive to subsequent delayed pulse to latch data presented at inputs thereof~~

means for successively latching each fixed memory storage unit of a sequentially-connected array as each fixed memory storage unit in turn becomes saturated with information, includes a pulse generator whose frequency is synchronized to the frequency of information inputted to the first semiconductor device, and which pulse generator simultaneously latches all fixed memory storage units of the same sequential order in all parallel sequentially-connected arrays, through connections that are functionally perpendicular to those of the sequentially-connected arrays.

5. (Currently Amended): The memory device according to claim 1, wherein the array of fixed interconnected memory storage units includes portions of a holographic recording medium.

6. (Currently Amended): The memory device according to claim 5, wherein:

said means for applying includes means for applying an information-containing holographic beam through separate holographic emitters or other means to multiple portions of the holographic recording medium; and

said means for successively activating includes a clock element or delaying device for rapidly moving or applying a reference beam from a first of the portions of the holographic

recording medium to a second of the portions of the holographic recording medium, such that temporally sequential variations of the said holographic beam are recorded successively in ~~distinct~~ portions.

7. (Currently Amended): The memory matrix device according to claim 1, further comprising:

~~means for successively activating~~ using the fixed sequentially-connected arrays as a means for subsequently reading each of the fixed memory storage units ~~or interconnected arrays of said units~~ in a sequentially-connected array, or in multiple parallel sequentially-connected arrays, in the same temporal sequence in which ~~they were activated during storage to retrieve the corresponding time slices of the temporally sequential information~~

each fixed memory storage unit was initially latched during storage, allowing retrieval of the temporal sequence of stored information without reliance on processing multiple memory addresses.

8. (Currently Amended): The memory matrix device according to claim 7, wherein the arrays of fixed memory storage units include[[s]] semiconductor memory devices.

9. (Currently Amended): The memory device according to claim 7, wherein the array of fixed memory storage units includes portions of a holographic recording medium.

10. (Currently Amended): The memory device according to claim 1, wherein the array of fixed memory storage units includes magnetic media.

11. (Currently Amended): The memory device according to claim 7, wherein the array of fixed memory storage units including magnetic media.

12. (Currently Amended): A memory matrix device for retrieving temporally sequential information, without processing multiple memory addresses, comprising:

means for activating a pulse generator or other signal generator to read previously-stored information in sequentially-connected arrays of fixed memory storage units in the sequential order in which said fixed memory storage units are connected;

means for ~~applying and storing the temporally sequential information in a specified spatial sequence of arrays of~~ generating signals transmitted through vertical arrays connecting multiple parallel sequentially-connected arrays (horizontal arrays), to allow simultaneous signal application to temporally corresponding fixed memory storage units and consequent reading of information originating at the same point in time in different parallel horizontal arrays

~~fixed memory storage units~~; and

means for successively ~~activating each of~~ reading the fixed memory storage units in the ~~spatial sequence to retrieve~~ same sequence order in which they were latched during storage, to allow retrieval and temporal recreation of the corresponding ~~time slices of the~~ stored temporally sequential information.

13. (Currently Amended): A method of storing temporally sequential information in an array of sequentially-connected fixed memory storage units, comprising the steps of:

applying the temporally sequential information to ~~spatially distinct~~ said sequentially-connected arrays of fixed memory storage units; and

successively ~~activating each of the fixed memory storage units or simultaneously-activated arrays of said units in sequence to store a corresponding time slice of the~~ storing bits of temporally sequential information in each of the fixed memory storage units in a sequence based on the order of connection of said fixed memory storage units ~~temporally sequential information, one time slice in each unit or linked array~~.

14. (Currently Amended): The method according to claim 1, ~~13, further comprising the step of:~~

~~successively activating each of the~~ wherein the input to the sequentially-connected array of fixed memory storage units ~~or simultaneously activated arrays of said units in the spatial sequence to retrieve the corresponding time slices of the temporally sequential information~~

is disabled upon completion of storage of a temporarily sequential event to prevent overwriting.

15. (Original): The method according to claim 13, wherein the step of applying includes the step of applying the temporally sequential information to the arrays of fixed memory storage units in parallel lines or waves.

16. (Original): The method according to claim 13, wherein the arrays of fixed memory storage units includes semiconductor memory devices.

17. (Currently Amended) The method according to claim 16, wherein:

the fixed memory storage units are connected in a permanent order such that whenever information is applied to the input and first fixed memory storage unit of a sequentially-connected array, the fixed memory storage units of said array are written to and latched in an invariant order; and

whenever the signal generator activates reading at the first fixed memory storage unit of the array, reading of the entire array of fixed memory storage unites occurs in the same invariant order

~~the step of applying the temporally sequential information to the array of fixed memory storage units includes the step of:~~

~~applying the temporally sequential information to an input bus that is coupled to inputs of a first semiconductor memory device or to a first array of simultaneously activated devices and a second semiconductor memory device or second array of such devices; and~~

~~the step of successively activating each of the fixed memory storage units or array of said units in sequence includes the steps of:~~

~~transmitting a pulse to a first semiconductor memory device or array, said first semiconductor memory device or array being responsive to the pulse to latch data presented at inputs thereof;~~

~~delaying or incrementing the pulse; and~~

~~transmitting the delayed pulse or second pulse to a second semiconductor memory device or array, adjacent functionally to the first semiconductor memory device, said second semiconductor memory device or array, said second semiconductor memory devices or array~~

~~being responsive to the delayed or incremented second pulse to latch data presented at inputs thereof~~.

18. (Original): The method according to claim 13, wherein the array of fixed memory storage units includes portions of a holographic recording medium.

19. (Original): The method according to claim 13, wherein:

the step of applying the temporally sequential information to the array of fixed memory storage units includes the step of-applying a temporally varying holographic beam to the multiple portions of the holographic recording medium; and

the step of successively activating each of the fixed memory storage units or arrays of said units in sequence includes the step of moving or applying a reference beam to a first of the portions of the holographic recording medium and then to a second of the portions of the holographic recording medium.